

REMARKS

Claims 1 and 12 have been amended. No new matter has been introduced. Claims 1-3, 6-9, 11, 12, 14, 16-20, 34, 36, 38-42, 46, and 51 are pending. Claims 1-3, 6-9, 11, 12, 14, 16-20, 34, 36, 38-42, 46, and 51 stand rejected. Applicant reserves the right to pursue the original claims and other claims in this application and in other applications.

Claims 1-3, 6-9, 11, 12, 14, 16-20 and 34, 36, 38-42, 46, and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Amagai (U.S. Patent No. 6,232,661) in combination with Forray (U.S. Pub. No. 2002/0062923). The rejection is respectfully traversed and reconsideration is respectfully requested.

The claimed inventions relate to a prepackaged semiconductor device assembly. As such, independent claim 1 recites a prepackaged semiconductor device assembly comprising “a solder mask over a substrate a die conductive paths connecting contacts on said die with contacts in said substrate; and an adhesive layer which is only partially cured for adhering said die to said solder mask, and being localized under the die.”

Independent claim 12 recites a prepackaged semiconductor device assembly comprising “a solder mask on a substrate; a die; electrical contacts on said substrate and said die, each contact on said die being connected to a respective contact on said substrate, said electrical contacts being devoid of contamination caused by outgassing from said solder mask; and an adhesive layer which is only partially cross-linked affixing said die to said solder mask, and being localized under the die.”

The references, alone or in combination, fail to disclose, teach, or suggest a prepackaged semiconductor device assembly comprising “a solder mask over a substrate a die conductive paths connecting contacts on said die with contacts in said substrate; and an adhesive layer which is only partially cured for adhering said die to said solder mask, and being localized under the die,” as recited by claim 1. As the Office Action admits (at page 3), Amagai fails “to disclose a partially-cured adhesive layer.” The Office Action cites Forray to allegedly cure the shortcomings of Amagai; the Office Action fails, however, to show where Forray discloses, teaches, or suggests a “an adhesive layer which is only partially cross-linked affixing said die to

A cross-sectional diagram of a semiconductor device assembly. A substrate 1 has a series of protrusions 3 along its bottom edge, each containing a core 7. The cores are divided into regions 7a and 7b by vertical dividers 7. A thin layer 6 is deposited over the entire surface of the substrate and protrusions. On top of layer 6, there is a rectangular block 8. A curved layer 9 covers the top and sides of block 8. The outer edges of the assembly are labeled 4 and 4b.

In fact, Amagai specifically teaches that the attaching tape (8) extend beyond the outer edge of the chip in order to cover the connecting lands 4(a). *See* Amagai at 6:58-7:3. Amagai teaches away from a prepackaged semiconductor device assembly having an adhesive layer which is only partially cured for adhering said die to said solder mask, and being localized under the die,” as recited by claim 1. In fact, Amagai teaches away from such an arrangement.

Claim 12 is also not rendered obvious by the cited references. The references, alone or in combination, fail to disclose, teach, or suggest each and every limitation of claim 12. For the reasons discussed above with respect to claim 1, the references, alone or in combination, fail

to disclose, teach, or suggest a prepackaged semiconductor device having “an adhesive layer which is only partially cross-linked affixing said die to said solder mask, and being localized under the die,” as recited by claim 12. For the reasons discussed above with respect to claim 1, Amagai teaches away from such an arrangement.

For at least this reason, Applicant respectfully submits that claim 12 is allowable over the references of record. Claims 14, 16-20, 36, 40, 46, and 51 depend from claim 12, and are allowable for at least the same reasons set forth above with respect to claim 12 and on their own merits. Accordingly, Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

In view of the above, Applicant believes the pending application is in condition for allowance.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1073, under Order No. M4065.0226/P226.

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Respectfully submitted,

By 

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